• Discuss ASTM packaging standards used by the US military
• Highlight selected ASTM specifications
• Military packaging personnel
  – Participated in ASTM D10 since the 1950s
  – ASTM D10.94 – Government Liaison formed in 1990s
  – Active roles in D10 Subcommittees, task groups and Ballots
    • Usually categorized as “Users” or “General Interest”
    • Participation permitted by Agencies to support DOD Standardization Program
• Since the 1980s, various DoD programs have emphasized use of Industry and non-government Standards
  – Standardization reform, 1980-90s
  – Acquisition Reform, 1990s to present
  – Performance-Based Logistics
• Non-government standards have gradually replaced Military Packaging specifications
• ASTM packaging standards often parallel MIL-SPECs
  – Particularly for package materials testing methods
  – Makes ASTM a “good fit” to convert military standards
<table>
<thead>
<tr>
<th>Federal/MILSPEC</th>
<th>ASTM Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>- PPP-B-636 – Boxes, Shipping, Fiberboard</td>
<td>- ASTM D5118 - Standard Practice for Fabrication of Fiberboard Shipping Boxes</td>
</tr>
<tr>
<td>- Appendix to PPP-B-626: Use Criteria, Assembly, Closure, Waterproofing, And Reinforcing Requirements</td>
<td>- ASTM D1974 - Standard Practice for Methods of Closing, Sealing, and Reinforcing Fiberboard Boxes</td>
</tr>
</tbody>
</table>
Conversions

ASTM D5486 - Standard Specification for Pressure-Sensitive Tapes for Packaging Box Closure, and Sealing

• Table shows conversions of old Federal Specifications to the ASTM
• Useful for Industry and Government personnel who find the old tapes referenced in old documentation - even in contracts.

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NOTE 1—The following is a comparison of types and classes of this specification compared with PPP-T-60 and PPP-T-76:

<table>
<thead>
<tr>
<th>Type</th>
<th>PPP-T-60</th>
<th>PPP-T-76</th>
</tr>
</thead>
<tbody>
<tr>
<td>D 5486/D 5486M</td>
<td>Type III</td>
<td>N/A</td>
</tr>
<tr>
<td>Type I</td>
<td>Class 1</td>
<td>Class 2</td>
</tr>
<tr>
<td>Type II</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Type III</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Type IV</td>
<td>Type IV</td>
<td>N/A</td>
</tr>
<tr>
<td>Type V</td>
<td>N/A</td>
<td>Same</td>
</tr>
</tbody>
</table>
• ASTM D 4169 - Standard Practice for Performance Testing of Shipping Containers and Systems
  – Distribution Cycle 18 mimics the Military Distribution System
    • Transportation by all modes (ground and air)
    • Less-than-favorable storage and shipping conditions
    • Acceptance Criteria and Assurance Levels track to Military Levels of Packing
Challenges of Military Packaging

The Military Distribution Environment
What works in the commercial environment may not perform under “normal” military conditions.
“Less than Favorable” Distribution Conditions:

- Temperatures 140-160 Deg F
- Dust and Rain
- Humidity Extremes
- Expansion/contraction of plastics and metals
- De-lamination of films, tapes and labels
- Long-term storage
  - At extremes
  - Outdoors
  - In storage prior to shipping
- Long Shelf life (5-10 years)
• ASTM D4169, D3951 are 1\textsuperscript{st} and 2\textsuperscript{nd} most-downloaded standards under D10
  – D5118 is in Top 5
  – D6251 in the Top 10
  – D1974 is in Top 20
ASTM D3951:
• Called out more than 12,000 times, in more than 950 US military major end-items
• Consensus process of standards development:
  – Opens avenues of communication for producers and military users
    • Communicate needs
    • Shortages, Diminishing manufacturing sources
    • Impact of regulations or procurement practices
  – Allows industry to determine if their products meet military requirements
  – Takes Military and Federal users out of role of dictating requirements
Benefits

• Use of ASTM Packaging Standards
  – Allows Military to adopt packaging Industry innovations
  – Verifies performance of commercial and military-unique packaging designs
    • Same performance standards apply to both
  – Allows non-military users and producers to select or provide high performance packaging materials
  – Helps Military and Federal Agencies cut costs by using industry standards

Deliver Undamaged Equipment to the Warfighter Faster!
QUESTIONS?
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